

Use Attainability Analysis

for

WBID 0713 McKinney Creek

Submitted by
SES, Inc.

To
Missouri Department of Natural Resources
Water Protection Program

Date Received: June 3, 2007

Field Data Sheets for Recreation Use Stream Surveys
Data Sheet A - Water Body Identification
(For water body being surveyed)

Water Body Information

Water Body Name:	McKinney Creek	WBID:	713
8 digit HUC code:	10300102	County:	Callaway
Upstream Legal Description	48N 9W 23		
Downstream Legal Description	48N 9W 26		
Number of Sites Evaluated	3		
List all site numbers, listed upstream to downstream	3,2,1		

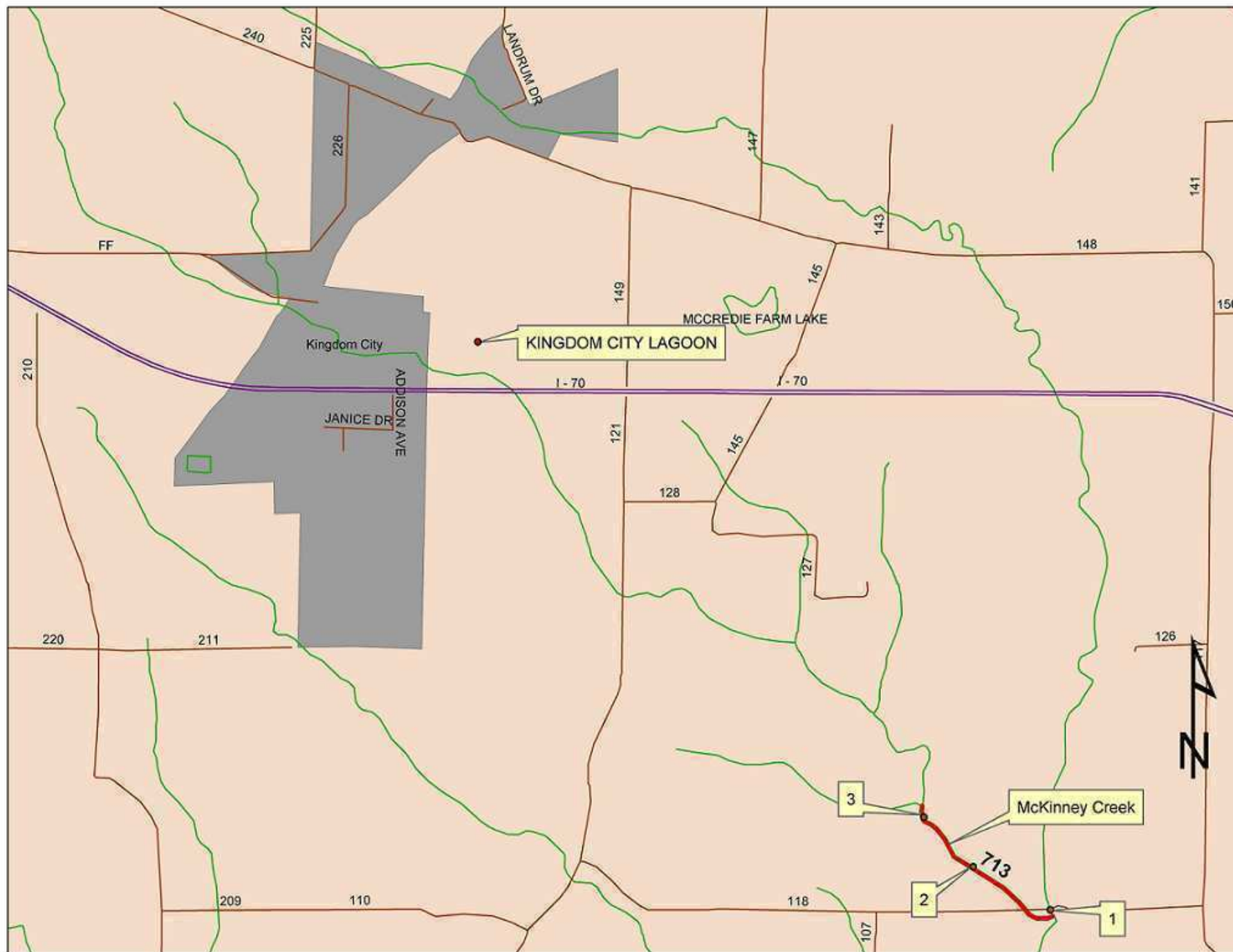
Discharger Facility Information

Discharger Facility Name(s):	Kingdom City Lagoon
Discharger Permit Number(s):	M00127370

UAA Surveyor

Name of Surveyor:	Aaron Ball	Telephone Number:	(913)307-0054 Ext. 14
Organization/Employer:	SES, Inc.		
Position:	Field Team Leader		

Signed: _____ Date: _____



Field Data Sheets for Recreational Use Stream Surveys
Data Sheet B - Site Characterization
(must be completed for each site)

WBID 713
 Site # 1

Date and Time: 5/7/2007 14:48

Current Weather Conditions Partly Cloudy

Weather Conditions for Past 10 days: Rained 5/1-5/4 and 5/6; 1-inch total

Drought Conditions? No

Site Location (e.g. road crossing) road crossing with road 118

GPS Mark: 1

Upstream Photo 2 Downstream Photo 1

Uses Observed (Uses actually observed at time of survey) Circle

Swimming	Skin Diving	SCUBA diving	Tubing
Water Skiing	Wind Surfing	Kayaking	Boating
Wading	Rafting	Hunting	Trapping
Fishing	None of the Above	Other	footprints

Surrounding Conditions

City/county parks	Playgrounds	MDC conservation lands	Urban areas
Campgrounds	Boating accesses	State parks	National Forests
Nature trails	Stairs/walkway	No trespass sign	Fence
Steep slopes	None of the Above	Other	

Indications of Human Use

Roads	Rope swings	Foot paths/prints	Dock/platform
Livestock Watering	RV/ATV Tracks	Camping Sites	Fire pit/ring
NPDES Discharge	Fishing Tackle	Other:	

WBID # 713 **Site #** 1
Mark # 1 **Dissolved Oxygen (ppm)** 9.8
Upstream Views Physical Dimensions: Is there any water present at this view? Yes

If so, is there an obvious current? Yes

Select one of the following channel features:

	% of Channel Feature				
Riffle	25				
Run	12				
Pool	63				

Downstream View's Physical Dimensions: Is there any water present at this view? Yes

If so, is there an obvious current? Yes

Substrate:

% Cobble	% Gravel	% Sand	% Silt
0	70	0	30
% Mud/Clay	% Bedrock		
0	0		

Aquatic Vegetation: (Note amount of vegetation or algal growth at the assessment site)

Vegetation primarily along stream bank, consisting of grasses, rushes, sedges. Algal growth on rocks.

Water Characteristics

Odor	Sewage	Musky	Chemical	None	Other
Color	Clear	Green	Gray	Milky	Other
Bottom Deposit	Sludge	Solids	Fine Sed.	None	Other
Surface Deposit	Oil	Scum	Foam	None	Other

Data Sheet C: Cross-Sectional Depth Measurements (for estimation of median depth)
(Median Depth Shown in Bold)

Site # 1

Mark # 1

0713_McKinney Creek_Callaway

	Depth (m)
Transect 1	0.15
Substrate:	0.20
	0.30
Water Clarity:	0.35
	0.40
Channel Feature:	0.40
Pool	0.40
Channel Width:	0.40
15 yards	0.50
0.40	0.50
Transect 2	0.30
Substrate:	0.30
	0.30
Water Clarity:	0.60
	0.60
Channel Feature:	0.40
Pool	0.30
Channel Width:	0.20
13 yards	0.20
0.30	0.30
Transect 3	0.20
Substrate:	0.20
	0.20
Water Clarity:	0.20
	0.25
Channel Feature:	0.25
	0.20
Channel Width:	0.20
8 yards	0.15
0.20	0.10
Transect 4	0.20
Substrate:	0.20
	0.10
Water Clarity:	0.10
	0.10
Channel Feature:	0.10
Riffle	0.05
Channel Width:	0.05
8 yards	0.05
0.10	0.05

	Depth (m)
Transect 5	0.40
Substrate:	0.40
	0.40
Water Clarity:	0.30
	0.30
Channel Feature:	0.30
Pool	0.30
Channel Width:	0.20
5 yards	0.20
0.30	0.20
Transect 6	0.20
Substrate:	0.20
	0.20
Water Clarity:	0.10
	0.00
Channel Feature:	0.00
Riffle	0.00
Channel Width:	0.10
7 yards	0.05
0.08	0.00
Transect 7	0.15
Substrate:	0.20
	0.15
Water Clarity:	0.05
	0.00
Channel Feature:	0.00
Pool	0.00
Channel Width:	0.00
9 yards	0.00
0.00	0.00
Transect 8	0.15
Substrate:	0.20
	0.30
Water Clarity:	0.50
	0.60
Channel Feature:	0.80
Pool	0.70
Channel Width:	0.60
8 yards	0.50
0.50	0.50

	Depth (m)
Transect 9	0.20
Substrate:	0.20
	0.20
Water Clarity:	0.20
	0.20
Channel Feature:	0.20
Run	0.10
Channel Width:	0.10
5 yards	0.05
0.20	0.05
Transect 10	0.00
Substrate:	0.00
	0.00
Water Clarity:	0.00
	0.05
Channel Feature:	0.05
	0.05
Channel Width:	0.10
10 yards	0.10
0.05	0.05
Transect 11	0.10
Substrate:	0.10
	0.15
Water Clarity:	0.15
	0.20
Channel Feature:	0.25
	0.25
Channel Width:	0.25
10 yards	0.20
0.20	0.20
Site Median	Site Maximum
0.20	0.80

Field Data Sheets for Recreational Use Stream Surveys
Data Sheet B - Site Characterization
(must be completed for each site)

WBID 713
 Site # 2

Date and Time: 5/7/2007 16:00

Current Weather Conditions Partly Cloudy

Weather Conditions for Past 10 days: Rained 5/1-5/4 and 5/6; 1-inch total

Drought Conditions? No

Site Location (e.g. road crossing)

GPS Mark: 2

Upstream Photo

Downstream Photo

Uses Observed (Uses actually observed at time of survey) Circle

Swimming	Skin Diving	SCUBA diving	Tubing
Water Skiing	Wind Surfing	Kayaking	Boating
Wading	Rafting	Hunting	Trapping
Fishing	None of the Above	Other	

Surrounding Conditions

City/county parks	Playgrounds	MDC conservation lands	Urban areas
Campgrounds	Boating accesses	State parks	National Forests
Nature trails	Stairs/walkway	No trespass sign	Fence
Steep slopes	None of the Above	Other	

Indications of Human Use

Roads	Rope swings	Foot paths/prints	Dock/platform
Livestock Watering	RV/ATV Tracks	Camping Sites	Fire pit/ring
NPDES Discharge	Fishing Tackle	Other:	

WBID # 713 **Site #** 2
Mark # 2 **Dissolved Oxygen (ppm)** 12.1
Upstream Views Physical Dimensions: Is there any water present at this view? yes
 If so, is there an obvious current? yes

Select one of the following channel features:

	% of Channel Feature				
Riffle	10				
Run	20				
Pool	70				

Downstream View's Physical Dimensions: Is there any water present at this view?

If so, is there an obvious current?

Substrate:

% Cobble	% Gravel	% Sand	% Silt
0	70	0	30
% Mud/Clay	% Bedrock		
0	0		

Aquatic Vegetation: (Note amount of vegetation or algal growth at the assessment site)

Vegetation primarily along stream bank, consisting of grasses, rushes, sedges. Algal growth on rocks

Water Characteristics

Odor	Sewage	Musky	Chemical	None	Other
Color	Clear	Green	Gray	Milky	Other
Bottom Deposit	Sludge	Solids	Fine Sed.	None	Other
Surface Deposit	Oil	Scum	Foam	None	Other

Data Sheet C: Cross-Sectional Depth Measurements (for estimation of median depth)
(Median Depth Shown in Bold)

Site # 2

Mark # 2

0713_McKinney Creek_Callaway

	Depth (m)
Transect 1	0.00
Substrate:	0.00
	0.05
Water Clarity:	0.10
	0.10
Channel Feature:	0.15
Pool	0.20
Channel Width:	0.20
13 yards	0.20
0.10	0.10
Transect 2	0.35
Substrate:	0.50
	0.50
Water Clarity:	0.50
	0.40
Channel Feature:	0.40
Pool	0.40
Channel Width:	0.30
12 yards	0.20
0.40	0.15
Transect 3	0.10
Substrate:	0.20
	0.20
Water Clarity:	0.20
	0.20
Channel Feature:	0.20
	0.10
Channel Width:	0.10
11 yards	0.05
0.15	0.05
Transect 4	0.00
Substrate:	0.05
	0.10
Water Clarity:	0.20
	0.35
Channel Feature:	0.40
Pool	0.60
Channel Width:	0.70
9 yards	0.70
0.38	0.70

	Depth (m)
Transect 5	0.00
Substrate:	0.00
	0.00
Water Clarity:	0.00
	0.05
Channel Feature:	0.10
Riffle	0.10
Channel Width:	0.10
8 yards	0.05
0.05	0.05
Transect 6	0.00
Substrate:	0.00
	0.00
Water Clarity:	0.10
	0.20
Channel Feature:	0.20
Run	0.10
Channel Width:	0.00
8 yards	0.00
0.00	0.00
Transect 7	0.00
Substrate:	0.10
	0.10
Water Clarity:	0.20
	0.20
Channel Feature:	0.10
Pool	0.06
Channel Width:	0.00
10 yards	0.20
0.10	0.20
Transect 8	0.00
Substrate:	0.10
	0.20
Water Clarity:	0.20
	0.20
Channel Feature:	0.30
Run	0.10
Channel Width:	0.00
4 yards	0.00
0.10	0.00

	Depth (m)
Transect 9	0.00
Substrate:	0.00
	0.00
Water Clarity:	0.10
	0.20
Channel Feature:	0.25
Pool	0.20
Channel Width:	0.15
9 yards	0.20
0.13	0.10
Transect 10	0.10
Substrate:	0.20
	0.25
Water Clarity:	0.20
	0.25
Channel Feature:	0.20
Pool	0.05
Channel Width:	0.00
8 yards	0.00
0.15	0.00
Transect 11	0.05
Substrate:	0.00
	0.10
Water Clarity:	0.20
	0.30
Channel Feature:	0.20
Pool	0.15
Channel Width:	0.00
5 yards	0.00
0.08	0.00

Site Median	Site Maximum
0.10	0.70

Field Data Sheets for Recreational Use Stream Surveys
Data Sheet B - Site Characterization
(must be completed for each site)

WBID 713
 Site # 3

Date and Time: 5/7/2007 17:15

Current Weather Conditions Partly Cloudy

Weather Conditions for Past 10 days: Rained 5/1-5/4 and 5/6; 1-inch total

Drought Conditions? No

Site Location (e.g. road crossing)

GPS Mark: 3

Upstream Photo

Downstream Photo

Uses Observed (Uses actually observed at time of survey) Circle

Swimming	Skin Diving	SCUBA diving	Tubing
Water Skiing	Wind Surfing	Kayaking	Boating
Wading	Rafting	Hunting	Trapping
Fishing	None of the Above	Other	

Surrounding Conditions

City/county parks	Playgrounds	MDC conservation lands	Urban areas
Campgrounds	Boating accesses	State parks	National Forests
Nature trails	Stairs/walkway	No trespass sign	Fence
Steep slopes	None of the Above	Other	

Indications of Human Use

Roads	Rope swings	Foot paths/prints	Dock/platform
Livestock Watering	RV/ATV Tracks	Camping Sites	Fire pit/ring
NPDES Discharge	Fishing Tackle	Other:	

WBID # 713 **Site #** 3
Mark # 3 **Dissolved Oxygen (ppm)** 11.8
Upstream Views Physical Dimensions: Is there any water present at this view? yes
 If so, is there an obvious current? yes

Select one of the following channel features:

	% of Channel Feature				
Riffle	25				
Run	0				
Pool	75				

Downstream View's Physical Dimensions: Is there any water present at this view?

If so, is there an obvious current?

Substrate:

% Cobble	% Gravel	% Sand	% Silt
0	70	0	30
% Mud/Clay	% Bedrock		
0	0		

Aquatic Vegetation: (Note amount of vegetation or algal growth at the assessment site)

Vegetation primarily along stream bank, consisting of grasses, rushes, sedges. Algal growth on rocks

Water Characteristics

Odor	Sewage	Musky	Chemical	None	Other
Color	Clear	Green	Gray	Milky	Other
Bottom Deposit	Sludge	Solids	Fine Sed.	None	Other
Surface Deposit	Oil	Scum	Foam	None	Other

Data Sheet C: Cross-Sectional Depth Measurements (for estimation of median depth)
(Median Depth Shown in Bold)

Site # 3

Mark # 3

0713_McKinney Creek_Callaway

	Depth (m)
Transect 1	0.30
Substrate:	0.35
	0.45
Water Clarity:	0.30
	0.30
Channel Feature:	0.30
Pool	0.30
Channel Width:	0.15
8 yards	0.25
0.30	0.25
Transect 2	0.10
Substrate:	0.10
	0.05
Water Clarity:	0.00
	0.00
Channel Feature:	0.00
Riffle	0.00
Channel Width:	0.00
9 yards	0.10
0.00	0.00
Transect 3	0.10
Substrate:	0.40
	0.60
Water Clarity:	0.70
	0.65
Channel Feature:	0.50
	0.30
Channel Width:	0.30
8 yards	0.10
0.35	0.00
Transect 4	0.10
Substrate:	0.20
	0.25
Water Clarity:	0.25
	0.30
Channel Feature:	0.35
	0.40
Channel Width:	0.35
8 yards	0.35
0.30	0.30

	Depth (m)
Transect 5	0.15
Substrate:	0.20
	0.30
Water Clarity:	0.40
	0.50
Channel Feature:	0.40
	0.40
Channel Width:	0.35
7 yards	0.10
0.33	0.10
Transect 6	0.05
Substrate:	0.05
	0.05
Water Clarity:	0.15
	0.20
Channel Feature:	0.20
	0.20
Channel Width:	0.20
5 yards	0.10
0.13	0.00
Transect 7	0.15
Substrate:	0.30
	0.40
Water Clarity:	0.50
	0.65
Channel Feature:	0.90
Pool	1.00
Channel Width:	0.50
8 yards	0.30
0.45	0.20
Transect 8	0.00
Substrate:	0.10
	0.10
Water Clarity:	0.10
	0.15
Channel Feature:	0.20
Pool	0.20
Channel Width:	0.25
8 yards	0.20
0.13	0.10

	Depth (m)
Transect 9	0.10
Substrate:	0.40
	0.80
Water Clarity:	1.00
	1.00
Channel Feature:	1.00
	0.80
Channel Width:	0.40
9 yards	0.30
0.60	0.20
Transect 10	0.05
Substrate:	0.05
	0.50
Water Clarity:	0.10
	0.10
Channel Feature:	0.20
	0.20
Channel Width:	0.15
5 yards	0.05
0.10	0.00
Transect 11	0.30
Substrate:	0.30
	0.30
Water Clarity:	0.30
	0.25
Channel Feature:	0.25
	0.30
Channel Width:	0.30
5 yards	0.20
0.30	0.10

Site Median	Site Maximum
0.25	1.00

WBID# 0713



Site# 1 Photo ID# 2, Upstream



Site# 1 Photo ID# 1, Downstream